Notice of Allowability	Application No.	Applicant(s)	
	10/766,224	DANE ET AL.	
	Examiner	Art Unit	
	Ari M. Diacou	3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *examiner innitiated interview on May 4, 2006*.

2. ☒ The allowed claim(s) is/are *9,11,12,14-17,20 and 22-28*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *May 4, 2006* .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mark Haynes on May 4, 2006.

See the attached sheets for the substance of the amendment.

2. The title has been amended to --Relay telescope including baffle, and high power laser amplifier utilizing the same--

Allowable Subject Matter

3. Claims 9, 11-12, 14-17, 20, and 22-28 are allowed.

4. Regarding claim 9, the prior art does not teach or make obvious the use of

- the optically transparent channel having openings on opposite ends of the solid member, and a waist within the solid member near said telescope focal point, said waist being smaller than said openings, and said channel having sides which taper near said waist at a grazing angle in a range of about 1 to 10 degrees.

within the context of claim 9 taken as a whole.

5. Regarding claim 17, the prior art does not teach or make obvious the use of

- the optically transparent channel having openings on opposite ends of the solid member, and a waist within the solid member near said telescope focal point, said waist being smaller than said openings, and said channel having sides which taper near said waist at a grazing angle in a range of about 1 to 10 degrees.

within the context of claim 17 taken as a whole.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ari M. Diacou whose telephone number is (571) 272-5591. The examiner can normally be reached on Monday - Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on (571) 272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AMD 5/7/2006

JACK KEITH
SUPERVISORY PATENT EXAMINER

EXAMINER'S AMENDMENT

In the claims:

1-8. (previously canceled).

9. (amend) A laser amplifier, comprising:

a gain medium;

a polarization rotator;

a passive polarizer;

a plurality of reflectors configured to define an optical path through the gain medium, the passive polarizer, and the polarization rotator; and

a phase conjugator configured to receive a beam from the optical path after the beam ~~pulse~~ has proceeded one or more transits through the optical path, the phase conjugator further configured to return the beam with reversed phase to the optical path to proceed an equal number of transits of the optical path in an opposite direction before exiting the optical path; and

a relay telescope having a telescope focal point, between the gain medium and the passive polarizer, which is used for relaying images between the gain medium and a location in the optical path near the passive polarizer, off angle beams being generated in the optical path in addition to a desired beam, the relay telescope having a baffle near said telescope focal point to block the off angle beams while passing the desired beam, the baffle comprising a solid member having an optically transparent channel, the optically transparent channel having openings on opposite ends of the solid member, and a waist within the solid member near said telescope focal point, said waist being smaller than said openings, and said channel having sides which taper near said waist at a grazing angle in a range of about 1 to 10 degrees.

10. (cancel).

11. (original) The system of claim 9, wherein said channel comprises a hollow in said member.

12. (original) The system of claim 9, wherein said optical cavity is aligned with walk off so that stray beams that transit the optical cavity more times than specified are blocked by said baffle.

13. (previously canceled)

14. (original) The system of claim 9, wherein said location in the optical path is adjacent the polarization rotator and the passive polarizer.

15. (original) The system of claim 9, including a second relay telescope in the optical path to relay images between said location and the phase conjugator.

16. (original) The system of claim 9, including a second relay telescope in the optical path to relay images between said location and the phase conjugator, the second relay telescope having a baffle which blocks off angle beams.

17. (amend) A laser amplifier, comprising:

a gain medium;

a polarization rotator;

a passive polarizer;

a plurality of reflectors configured to define an optical path through the gain medium, the passive polarizer, and the polarization rotator; and

a phase conjugator configured to receive a beam from the optical path after the pulse has proceeded one or more transits through the optical path, the phase conjugator further configured to return the beam with reversed phase to the optical path to proceed an equal number of transits of the optical path in an opposite direction before exiting the optical path; and

a relay telescope having a telescope focal point, between the gain medium and the passive polarizer, which is used for relaying images between the gain medium and a location in the optical path near the passive polarizer, the relay telescope comprising

a first relay lens;

a second relay lens;

a vacuum chamber between the first and second relay lenses, the first and second relay lenses focusing beams at a common focal point within the vacuum chamber;

a kinematic mount within the vacuum chamber, adapted to secure beam baffles near the common focal point; and

an access port on the vacuum chamber, adapted for insertion and removal of beam baffles; and including

a baffle adapted to be mounted in said kinematic mount, said baffle comprising a solid member having an optically transparent channel, the optically transparent channel having openings on opposite ends of the solid member, and a waist within the solid member near said telescope focal point, said waist being smaller than said openings, and said channel having sides which taper near said waist at a grazing angle in a range of about 1 to 10 degrees.

18. (cancel)

19. (cancel)

20. (amend) The system of claim 17, ~~including a baffle adapted to be mounted in said kinematic mount, said baffle comprising a solid member having a~~ wherein said optically transparent channel comprises ~~defined by~~ a hollow in said solid member~~, the channel having openings on opposite ends of the solid member, and a waist within the solid member near said telescope focal point, said waist being smaller than said openings, and said channel having sides which taper near said waist~~.

21. (cancel)

22. (amend) The system of claim 17, including ~~a far-field, tapered baffle adapted to be mounted in said kinematic mount, said far-field, tapered baffle comprising a solid member having an optically transparent channel, the optically transparent channel having openings on opposite ends of the solid member, and a waist within the solid member near said telescope focal point, said waist being smaller than said openings, and said channel having sides which taper near said waist; and~~ a far-field alignment baffle adapted to be mounted in said kinematic mount, said alignment baffle comprising a pinhole aperture.

23. (original) The system of claim 17, including a near-field baffle mounted adjacent one of said first and second relay lenses.

24. (original) The system of claim 17, including a first near-field baffle mounted adjacent said first relay lens, and a second near-field baffle mounted adjacent said second relay lens to block stray beams.

25. (original) The system of claim 17, wherein said optical cavity is aligned with walk off so that stray beams that transit the optical cavity more times than specified are blocked by a baffle in said kinematic mount.

26. (original) The system of claim 17, wherein said location in the optical path is adjacent the polarization rotator and the passive polarizer.

27. (original) The system of claim 17, including a second relay telescope in the optical path to relay images between said location and the phase conjugator.

28. (original) The system of claim 17, including a second relay telescope in the optical path to relay images between said location and the phase conjugator, the second relay telescope having a baffle which blocks off angle beams.

29-36. (previously canceled)